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| 09/334,424 | 06/16/1999 | YASUTOMO NISHINA | 450100-4916 | 5326 |

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| EXAMINER |
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SALCE, JASON P

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2623

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/334,424

Applicant(s)

NISHINA ET AL.

Examiner

Jason P. Salce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17, 19 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17, 19 and 21-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's request for reconsideration (through the filing of a Pre-Appeal Conference Request) of the finality of the rejection of the last Office action has been considered and the finality of that action is withdrawn.

In view of the Pre-Appeal Conference request, the QAS (Quality Assurance Specialist) has found that claims 7, 9, 11, 14, 17, 19, 23-24 and 26-27 are non-statutory under 35 U.S.C. 101. The QAS and SPE have also agreed that the rejection stands. Therefore a Non-Final Office Action is issued below including the new ground of rejection under 35 U.S.C. 101.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 7, 9, 11, 14, 17, 19, 23-24 and 26-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Independent claim 12 recites "A provider for providing a computer-readable program for causing an information transmitting apparatus which transmits a plurality of signals, said signals including at least video signals and audio signals, to an information receiving apparatus to execute a process". In regards to the **Interim Guidelines for Examination of Patent Application for Patent Subject Matter Eligibility**, the claims do not recite a computer-readable medium encoded with a computer program, which is

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a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory (see Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035 and Page 53 of the Interim Guidelines).

Additionally, note page 30 (Annex I) of the Interim Guidelines, which provides a flow chart to determine if the claimed invention comprises non-statutory subject matter. Note that one of the tests used to determine if a claim is non-statutory is determining whether the claimed invention is a practical application of an abstract idea, law of nature, or natural phenomenon (see page 19 of the Interim Guidelines). The examiner further notes that this test requires that the claimed invention not only provide a transformation or reduction of an article to a different state or thing (page 19 of the Interim Guidelines) but provide a useful, concrete and tangible result.

In regards to the claimed invention providing a transformation or reduction of an article to a different state or thing, the claimed invention fails to provide such a change. Note that claim 12 simply recites receiving instructions that for causing an information transmitting apparatus where no transformation or reduction has taken place in the claim limitations.

In regards to the claimed invention providing a useful, concrete and tangible result, the claimed invention fails to provide a result and only states instructions that cause a processor-based system to receive data and enable other data to be received. Therefore, since no result is positively recited, the claim is deemed non-statutory.

In regards to independent claims 14, 19, 24 and 27, see the rejection of claim 11

and further note that since all dependent claim fall under the rejected independent claims, all dependent claims fall rejected under their corresponding independent claims.

Further note that claims 7, 10, 17, 23 and 26 correspond to a method and since claim 11 is found non-statutory and claim 1 is statutory, the examiner cannot determine if claims 7 and 10 corresponds to the statutory or non-statutory independent claim, therefore, claims 7 and 10 are also found non-statutory. The examiner further notes that the same determination applies to method claims 17, 23 and 26.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. (U.S. Patent No. 6,522,672) in view of Shiroshita et al. (U.S. Patent No. 5,892,894).

Referring to claim 1, Matsuzaki discloses an information transmitting apparatus, which transmits a plurality of signals (see Figure 1), said signals including at least video signals and audio signals (see Column 4, Lines 45-48), to an information receiving apparatus (see Column 9, Lines 24-25 for receiving information at a receiver).

Matsuzaki also discloses a plurality of encoding means for separately encoding each of said video signals and each of said audio signals (see elements 82v and 82a in Figure 2).

Matsuzaki also discloses a first multiplexing means for multiplexing a plurality of pairs of encoded signals (see elements 34a through 34n in Figure 3), each pair of encoded signals having one encoded video signal and one encoded audio signal (see Column 4, Lines 41-50).

Matsuzaki also discloses a second multiplexing means for multiplexing the multiplexed plurality of pairs of encoded video signals and encoded audio signals (see Column 5, Lines 66-67 and Column 6, Lines 1-4).

Matsuzaki also discloses a control means for controlling a multiplexing ratio among the plurality of signals in the second multiplexing means (see Column 5, Lines 38-45 and Column 6, Lines 5-9 for the second multiplexing means being controlled by the control means).

Matsuzaki discloses at Column 4, Lines 45-49 that multiplexing section 34 multiplexes a plurality of media encoded bit streams 75 for each packet (which can include video, audio and data). Matsuzaki further discloses that the multiplexing control indicates preferentially multiplexing of the information with higher priority by controlling on/off of the multiplexing according to the priority for each encoded bit stream 75 (see Column 4, Lines 63-67). For further support, note Column 6, Line 60 through Column 7, Line 16 for multiplexing according to a priority table. Therefore, a video, audio and data occupation bandwidth is clearly controlled.

Matsuzaki further teaches that said control means controls said multiplexing ratio to enable acquisition of program information in a reduced period of time by increasing transmission of program data when transmission of video data and audio data can be decreased (see Column 2, Lines 26-28, 35-39 and 65-66 and Column 3, Lines 1-4 and Column 4, Line 63 through Column 5, Line 3 for controlling the multiplexing ratio by controlling how much information is added to the encoded bit stream, which in turn “that multiplexing or not multiplexing certain media information is supposed to control a transmission rate of the media information”). Therefore, if audio and video data have a low priority and program information has a high priority, more program information will be transmitted, thereby increasing the transmission rate of the program.

Matsuzaki teaches that the information receiving apparatus reads contents of program information of a current and a next program (see Column 9, Lines 23-25), but not at a re-transmission cycle of the program information data. Matsuzaki also teaches recognizing a transmission status of the program information data indicating broadcast schedules (see Column 5, Lines 31-45 for multiplexing the program information data according to information which specifies optimal transmission of the media, therefore recognizing a transmission status required for proper transmission of the media to the receiving apparatus).

Shiroshita discloses a data re-transmission process that detects if a terminal is providing poor performance in the network and retransmits packets at a cycle

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representative of the terminal's performance state (see Column 4, Line 59 through Column 5, Line 30).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the transmission system, as taught by Matsuzaki, using the re-transmission system, as taught by Shiroshita, for the purpose of improving the communication efficiency (see Column 2, Lines 60-61 of Shiroshita).

Referring to claim 2, Matsuzaki discloses that the transmitting apparatus transmits the plurality of signals as a single transport stream (see Column 8, Lines 40-44 for transmitting a single transport stream).

Referring to claim 3, Matsuzaki discloses a database means for providing data that relates to transmission rates of the plurality of signals at each time point (see Figure 4 for a priority correlation table for indicating priorities for multiple types of media and Column 7, Lines 20-22 and Column 5, Lines 46-53 for adding time information so that a "time point" can therefore be determined), wherein the control means controls the multiplexing ratio while referring to the database (see Column 8, Lines 1-7).

Referring to claim 4, Matsuzaki discloses that the control means controls an output rate each of the plurality of the encoding means (see again Column 8, Lines 1-7 and note that setting the multiplexer with a priority for either the video, audio or data will control the output rate of that particular piece of information).

Referring to claim 5, Matsuzaki discloses that the pluralities of signals further comprise program information (see Column 4, Lines 45-48).

Referring to claim 6, that Matsuzaki discloses an information transmitting apparatus, which transmits program information (see Figure 1), to an information receiving apparatus (see Column 9, Lines 24-25 for receiving information at a receiver).

Matsuzaki also discloses a plurality of video and audio encoding means (see elements 82a, 82v in Figure 2).

Matsuzaki also discloses a program information data generating means for generating data of the program information (see elements 82d in Figure 1).

Matsuzaki also discloses a first multiplexing means for multiplexing the program information, video and audio (see element 34 in Figure 1 and Column 4, Lines 41-50 for forming pairs of the multiplexed data):

Matsuzaki also discloses a control means for controlling a data output rate of the video, audio and program information by controlling a multiplexing ratio between these data elements (see Column 5, Lines 38-45 and Column 6, Lines 5-9 for the second multiplexing means being controlled by the control means).

Matsuzaki discloses at Column 4, Lines 45-49 that multiplexing section 34 multiplexes a plurality of media encoded bit streams 75 for each packet (which can include video, audio and data). Matsuzaki further discloses that the multiplexing control indicates preferentially multiplexing of the information with higher priority by controlling

on/off of the multiplexing according to the priority for each encoded bit stream 75 (see Column 4, Lines 63-67). For further support, note Column 6, Line 60 through Column 7, Line 16 for multiplexing according to a priority table. Therefore, a video, audio and data occupation bandwidth is clearly controlled.

Matsuzaki further teaches that said control means controls said multiplexing ratio to enable acquisition of program information in a reduced period of time by increasing transmission of program data when transmission of video data and audio data can be decreased (see Column 2, Lines 26-28, 35-39 and 65-66 and Column 3, Lines 1-4 and Column 4, Line 63 through Column 5, Line 3 for controlling the multiplexing ratio by controlling how much information is added to the encoded bit stream, which in turn “that multiplexing or not multiplexing certain media information is supposed to control a transmission rate of the media information”). Therefore, if audio and video data have a low priority and program information has a high priority, more program information will be transmitted, thereby increasing the transmission rate of the program.

Matsuzaki teaches that the information receiving apparatus reads contents of program information of a current and a next program (see Column 9, Lines 23-25), but not at a re-transmission cycle of the program information data. Matsuzaki also teaches recognizing a transmission status of the program information data indicating broadcast schedules (see Column 5, Lines 31-45 for multiplexing the program information data according to information which specifies optimal transmission of the media, therefore

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recognizing a transmission status required for proper transmission of the media to the receiving apparatus).

Shiroshita discloses a data re-transmission process that detects if a terminal is providing poor performance in the network and retransmits packets at a cycle representative of the terminal's performance state (see Column 4, Line 59 through Column 5, Line 30).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the transmission system, as taught by Matsuzaki, using the re-transmission system, as taught by Shiroshita, for the purpose of improving the communication efficiency (see Column 2, Lines 60-61 of Shiroshita).

Referring to claims 7-9, see rejection of claims 1, 3 and 5, respectively.

Referring to claims 22-24, see the rejection of claim 1.

4. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. (U.S. Patent No. 6,522,672) in view of Shiroshita et al. (U.S. Patent No. 5,892,894) in further view of Eyer et al. (U.S. Patent No. 5,801,753).

Referring to claim 10, that Matsuzaki discloses an information transmitting apparatus, which transmits program information (see Figure 1), to an information receiving apparatus (see Column 9, Lines 24-25 for receiving information at a receiver).

Matsuzaki also discloses a plurality of video and audio encoding means (see elements 82a, 82v in Figure 2).

Matsuzaki also discloses a program information data generating means for generating data of the program information (see elements 82d in Figure 1).

Matsuzaki also discloses a first multiplexing means for multiplexing the program information, video and audio (see element 34 in Figure 1 and Column 4, Lines 41-50 for forming pairs of the multiplexed data).

Matsuzaki also discloses a control means for controlling a data output rate of the video, audio and program information by controlling a multiplexing ratio between these data elements (see Column 5, Lines 38-45 and Column 6, Lines 5-9 for the second multiplexing means being controlled by the control means).

Matsuzaki discloses at Column 4, Lines 45-49 that multiplexing section 34 multiplexes a plurality of media encoded bit streams 75 for each packet (which can include video, audio and data). Matsuzaki further discloses that the multiplexing control indicates preferentially multiplexing of the information with higher priority by controlling on/off of the multiplexing according to the priority for each encoded bit stream 75 (see Column 4, Lines 63-67). For further support, note Column 6, Line 60 through Column 7, Line 16 for multiplexing according to a priority table. Therefore, a video, audio and data occupation bandwidth is clearly controlled.

Matsuzaki further teaches that said control means controls said multiplexing ratio to enable acquisition of program information in a reduced period of time by increasing transmission of program data when transmission of

video data and audio data can be decreased (see Column 2, Lines 26-28, 35-39 and 65-66 and Column 3, Lines 1-4 and Column 4, Line 63 through Column 5, Line 3 for controlling the multiplexing ratio by controlling how much information is added to the encoded bit stream, which in turn "that multiplexing or not multiplexing certain media information is supposed to control a transmission rate of the media information"). Therefore, if audio and video data have a low priority and program information has a high priority, more program information will be transmitted, thereby increasing the transmission rate of the program.

Matsuzaki teaches that the information receiving apparatus reads contents of program information of a current and a next program (see Column 9, Lines 23-25), but not at a re-transmission cycle of the program information data. Matsuzaki also teaches recognizing a transmission status of the program information data indicating broadcast schedules (see Column 5, Lines 31-45 for multiplexing the program information data according to information which specifies optimal transmission of the media, therefore recognizing a transmission status required for proper transmission of the media to the receiving apparatus).

Shiroshita discloses a data re-transmission process that detects if a terminal is providing poor performance in the network and retransmits packets at a cycle representative of the terminal's performance state (see Column 4, Line 59 through Column 5, Line 30).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the transmission system, as taught by Matsuzaki,

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using the re-transmission system, as taught by Shiroshita, for the purpose of improving the communication efficiency (see Column 2, Lines 60-61 of Shiroshita).

Matsuzaki and Shiroshita fail to disclose that the information receiving apparatus is adapted to acquire electronic program guide data only during a data transfer rate increase period.

Eyer teaches a separating and storing program information (trickle data streams and demand data streams of EPG data) according to selections made by the user (if EPG data stored in local memory (trickle data) is selected or EPG data that has to be transmitted to a user (demand data)) at Column 12, Lines 55-67 and Column 13, Lines 1-10 for receiving both types of data at different transmission rates and separating and storing the data accordingly. Also note Column 6, Lines 5-8 for selecting a specific type of EPG data and Column 3, Lines 35-55 for storing EPG data at different rates.

Eyer therefore teaches acquiring electronic program guide data only during a data transfer rate increase period (also see Column 3, Lines 47-51 and Column 5, Lines 62-67 and Column 6, Lines 1-8).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the information receiving apparatus, as taught by Matsuzaki and Shiroshita, using the trickle and demand EPG data transmission rate functionality, as taught by Eyer, for the purpose of improving the responsiveness and user friendliness of the program guide function by ensuring that the memory in a subscriber's decoder always holds a database which is up-to-date for current programming (see Column 5, Lines 64-67 and Column 6, Line 1 of Eyer).

Referring to claim 11, see the rejection of claim 10.

Referring to claim 12, Matsuzaki discloses a database means for providing data that relates to transmission rates of the plurality of signals at each time point (see Figure 4 for a priority correlation table for indicating priorities for multiple types of media and Column 7, Lines 20-22 and Column 5, Lines 46-53 for adding time information so that a "time point" can therefore be determined), wherein the control means controls the multiplexing ratio while referring to the database (see Column 8, Lines 1-7).

Referring to claim 13, Matsuzaki discloses that the pluralities of signals further comprise program information (see Column 4, Lines 45-48).

Referring to claim 14, see the rejection of claim 10.

5. Claims 15, 17, 19, 21 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozkan et al. (U.S. Patent No. 6,111,612) in view of Eyer et al. (U.S. Patent No. 5,801,753) in further view of Matsuzaki et al. (U.S. Patent No. 6,522,672) in further view of Shiroshita et al. (U.S. Patent No. 5,892,894).

Referring to claim 15, Ozkan discloses an information receiving apparatus (see Figure 1), which receives multiplexed program information (see element 22 in Figure 1

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and Column 3, Lines 19-20 for demultiplexing a multiplexed program information signal).

Ozkan also discloses separating means for separating the multiplexed program information (see again Column 3, Lines 19-20 for a demultiplexer used for separating the video, audio and data).

Ozkan also discloses a plurality of decoding means for separately decoding each of the video signals and each of the audio signals (see Column 3, Lines 20-24 for a plurality of decoders used for decoding the separated audio and video).

Ozkan also discloses a storing means for storing the program information separated by the separating means (see Column 3, Lines 53-56).

Ozkan also discloses a control means for controlling operations of the separating means and the storing means (see Column 4, Lines 17-19 for controlling the storing operation from demultiplexer 22 by processor 60 and Column 3, Lines 30-33 for separating a channel for viewing using the processor 60).

Ozkan is silent as to storing and separating program information in accordance with a transmission rate of the program information.

Eyer teaches a separating and storing program information (trickle data streams and demand data streams of EPG data) according to selections made by the user (if EPG data stored in local memory (trickle data) is selected or EPG data that has to be transmitted to a user (demand data)) at Column 12, Lines 55-67 and Column 13, Lines 1-10 for receiving both types of data at different transmission rates and separating and

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storing the data accordingly. Also note Column 6, Lines 5-8 for selecting a specific type of EPG data and Column 3, Lines 35-55 for storing EPG data at different rates.

Eyer therefore teaches acquiring electronic program guide data only during a data transfer rate increase period (also see Column 3, Lines 47-51 and Column 5, Lines 62-67 and Column 6, Lines 1-8).

Eyer also teaches the use of time slots (see Column 7, Lines 1-8) and that packets are filtered according to the page and time slot of interest (see Column 7, Lines 9-26), therefore controlling a data acquisition time of the program information. Also note Column 2, Lines 28-39 for further support.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the information receiving apparatus, as taught by Ozkan, using the trickle and demand EPG data transmission rate functionality, as taught by Eyer, for the purpose of improving the responsiveness and user friendliness of the program guide function by ensuring that the memory in a subscriber's decoder always holds a database which is up-to-date for current programming (see Column 5, Lines 64-67 and Column 6, Line 1 of Eyer).

Although Ozkan and Eyer disclose receiving a plurality of signals multiplexed together, Ozkan and Eyer are silent as to the program information being comprised of multiplexed pairs of encoded signals, each pair of encoded signals having one encoded video signal and one encoded audio signals.

Matsuzaki teaches a first multiplexing means for multiplexing a plurality of pairs of encoded signals (see elements 34a through 34n in Figure 3), each pair of encoded

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signals having one encoded video signal and one encoded audio signal (see Column 4, Lines 41-50).

Matsuzaki further teaches that said control means controls said multiplexing ratio to enable acquisition of program information in a reduced period of time by increasing transmission of program data when transmission of video data and audio data can be decreased (see Column 2, Lines 26-28, 35-39 and 65-66 and Column 3, Lines 1-4 and Column 4, Line 63 through Column 5, Line 3 for controlling the multiplexing ratio by controlling how much information is added to the encoded bit stream, which in turn “that multiplexing or not multiplexing certain media information is supposed to control a transmission rate of the media information”). Therefore, if audio and video data have a low priority and program information has a high priority, more program information will be transmitted, thereby increasing the transmission rate of the program.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the information receiving apparatus, as taught by Ozkan and Eyer, using the multiplexed pairs of audio and video signals, as taught by Matsuzaki, for the purpose of allowing a receiver to easily edit or process the information (see Column 9, Lines 22-24 of Matsuzaki).

Matsuzaki teaches that the information receiving apparatus reads contents of program information of a current and a next program (see Column 9, Lines 23-25), however, Matsuzaki, Eyer and Ozkan fail to teach this process at a re-transmission cycle of the program information data.

Matsuzaki also teaches recognizing a transmission status of the program information data indicating broadcast schedules (see Column 5, Lines 31-45 for multiplexing the program information data according to information which specifies optimal transmission of the media, therefore recognizing a transmission status required for proper transmission of the media to the receiving apparatus).

Shiroshita discloses a data re-transmission process that detects if a terminal is providing poor performance in the network and retransmits packets at a cycle representative of the terminal's performance state (see Column 4, Line 59 through Column 5, Line 30).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the transmission system, as taught by Ozkan, Eyer and Matsuzaki, using the re-transmission system, as taught by Shiroshita, for the purpose of improving the communication efficiency (see Column 2, Lines 60-61 of Shiroshita).

Referring to claim 17, see the rejection of claim 15.

Referring to claim 19, see the rejection of claims 15.

Referring to claim 21, Ozkan discloses an information receiving apparatus (see Figure 1), which receives multiplexed program information (see element 22 in Figure 1

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and Column 3, Lines 19-20 for demultiplexing a multiplexed program information signal).

Ozkan also discloses separating means for separating the multiplexed program information (see again Column 3, Lines 19-20 for a demultiplexer used for separating the video, audio and data).

Ozkan also discloses a plurality of decoding means for separately decoding each of the video signals and each of the audio signals (see Column 3, Lines 20-24 for a plurality of decoders used for decoding the separated audio and video).

Ozkan also discloses a storing means for storing the program information separated by the separating means (see Column 3, Lines 53-56).

Ozkan also discloses a control means for controlling operations of the separating means and the storing means (see Column 4, Lines 17-19 for controlling the storing operation from demultiplexer 22 by processor 60 and Column 3, Lines 30-33 for separating a channel for viewing using the processor 60).

Ozkan is silent as to storing and separating program information in accordance with a transmission rate of the program information.

Eyer teaches a separating and storing program information (trickle data streams and demand data streams of EPG data) according to selections made by the user (if EPG data stored in local memory (trickle data) is selected or EPG data that has to be transmitted to a user (demand data)) at Column 12, Lines 55-67 and Column 13, Lines 1-10 for receiving both types of data at different transmission rates and separating and

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storing the data accordingly. Also note Column 6, Lines 5-8 for selecting a specific type of EPG data and Column 3, Lines 35-55 for storing EPG data at different rates.

Eyer therefore teaches acquiring electronic program guide data only during a data transfer rate increase period (also see Column 3, Lines 47-51 and Column 5, Lines 62-67 and Column 6, Lines 1-8).

Eyer teaches the use of time slots (see Column 7, Lines 1-8) and that packets are filtered according to the page and time slot of interest (see Column 7, Lines 9-26), therefore controlling a data acquisition time of the program information. Also note Column 2, Lines 28-39 for further support.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the information receiving apparatus, as taught by Ozkan, using the trickle and demand EPG data transmission rate functionality, as taught by Eyer, for the purpose of improving the responsiveness and user friendliness of the program guide function by ensuring that the memory in a subscriber's decoder always holds a database which is up-to-date for current programming (see Column 5, Lines 64-67 and Column 6, Line 1 of Eyer).

Although Ozkan and Eyer disclose receiving a plurality of signals multiplexed together, Ozkan and Eyer are silent as to the program information being comprised of multiplexed pairs of encoded signals, each pair of encoded signals having one encoded video signal and one encoded audio signals and are also silent as to the details of the transmitting apparatus.

Matsuzaki discloses an information transmitting apparatus, which transmits a plurality of signals (see Figure 1), said signals including at least video signals and audio signals (see Column 4, Lines 45-48), to an information receiving apparatus (see Column 9, Lines 24-25 for receiving information at a receiver).

Matsuzaki also discloses a plurality of encoding means for separately encoding each of said video signals and each of said audio signals (see elements 82v and 82a in Figure 2).

Matsuzaki also discloses a first multiplexing means for multiplexing a plurality of pairs of encoded signals (see elements 34a through 34n in Figure 3), each pair of encoded signals having one encoded video signal and one encoded audio signal (see Column 4, Lines 41-50).

Matsuzaki also discloses a second multiplexing means for multiplexing the multiplexed plurality of pairs of encoded video signals and encoded audio signals (see Column 5, Lines 66-67 and Column 6, Lines 1-4).

Matsuzaki also discloses a control means for controlling a multiplexing ratio among the plurality of signals in the second multiplexing means (see Column 5, Lines 38-45 and Column 6, Lines 5-9 for the second multiplexing means being controlled by the control means).

Matsuzaki further teaches that said control means controls said multiplexing ratio to enable acquisition of program information in a reduced period of time by increasing transmission of program data when transmission of video data and audio data can be decreased (see Column 2, Lines 26-28, 35-39

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and 65-66 and Column 3, Lines 1-4 and Column 4, Line 63 through Column 5, Line 3 for controlling the multiplexing ratio by controlling how much information is added to the encoded bit stream, which in turn *“that multiplexing or not multiplexing certain media information is supposed to control a transmission rate of the media information”*). Therefore, if audio and video data have a low priority and program information has a high priority, more program information will be transmitted, thereby increasing the transmission rate of the program.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the information receiving system, as taught by Ozkan and Eyer, using the transmitting apparatus, as taught by Matsuzaki, for the purpose of allowing a receiver to easily edit or process the information (see Column 9, Lines 22-24 of Matsuzaki).

Matsuzaki teaches that the information receiving apparatus reads contents of program information of a current and a next program (see Column 9, Lines 23-25), however, Ozkan, Eyer and Matsuzaki fail to teach this process at a re-transmission cycle of the program information data. Matsuzaki also teaches recognizing a transmission status of the program information data indicating broadcast schedules (see Column 5, Lines 31-45 for multiplexing the program information data according to information which specifies optimal transmission of the media, therefore recognizing a transmission status required for proper transmission of the media to the receiving apparatus).

Shiroshita discloses a data re-transmission process that detects if a terminal is providing poor performance in the network and retransmits packets at a cycle representative of the terminal's performance state (see Column 4, Line 59 through Column 5, Line 30).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the transmission system, as taught by Ozkan, Eyer and Matsuzaki, using the re-transmission system, as taught by Shiroshita, for the purpose of improving the communication efficiency (see Column 2, Lines 60-61 of Shiroshita).

Referring to claims 25-27, see the rejection of claim 15, and note that Eyer discloses extracting information of a transmission status of the program information that is included in the program information data separated by the separating means (see Column 11, Lines 10-23 for extracting a field of the program information that states if the status of the transmission is trickle data or demand data).

Referring to claim 28, see the rejection of claim 21 and note that Eyer discloses extracting information of a transmission status of the program information that is included in the program information data separated by the separating means (see Column 11, Lines 10-23 for extracting a field of the program information that states if the status of the transmission is trickle data or demand data).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P. Salce whose telephone number is (571) 272-7301. The examiner can normally be reached on M-F 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Jason P Salce
Primary Examiner
Art Unit 2623

January 8, 2007


JASON SALCE
PRIMARY PATENT EXAMINER